**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Canceled)

2. (Previously Presented) The method of claim 20, wherein each $R^4$ is independently

(a) H,
(b) halo,
(e) $SR^{12}$,
(f) $S(O)_mR^{13}$,
(g) $NR^9R^{10}$,
(h) $NR^9S(O)_mR^{13}$,
(i) $NR^9C(=O)OR^{13}$,
(j) phenyl optionally substituted by one or more $R^8$,
(k) heteroaryl optionally substituted by one or more $R^8$,
(l) cyano,
(m) nitro,
(n) $CONR^9R^{10}$,
(o) $CO_2R^{12}$,
(p) $C(=O)R^{13}$,
(q) $C(=NOR^{12})R^{13}$,
(s) $NR^9C(=O)$-$R^{12}$,
(t) $C_{1-7}$alkyl, $C_{1-7}$ alkenyl or $C_{1-7}$ alkynyl each of which is optionally substituted by one or more $R^{11}$, or
(u) $het^1$ optionally substituted by one or more $R^8$.

3. (Previously Presented) The method of claim 2, wherein each $R^4$ is independently selected from $NO_2$, H, Br, F, $CF_3$, CN, $NH_2$, -C(O)-$OCH_3$, -S-$CH_3$, -$S(O)_2$-$CH_3$, -N($OCH_3$)-$CH_3$, -NH-C(O)-O-tbutyl, -NH-C(O)-$CH_3$, heteroaryl optionally

substituted by one or more $R^8$, het[1] optionally substituted by one or more $R^8$, $-S(O)_2-CH_3$, or phenyl optionally substituted by one or more of $NO_2$, Cl, F, $-OCH_3$, and $-OCF_3$.

4. (Previously Presented) The method of claim 20, wherein each $R^3$ is H.

5. (Previously Presented) The method of claim 20, wherein $R^1$ is $-C(O)R^6$.

6. (Previously Presented) The method of claim 20, wherein $R^2$ is $-C(O)R^7$.

7. (Previously Presented) The method of claim 6, wherein $R^1$ is $-C(O)R^6$.

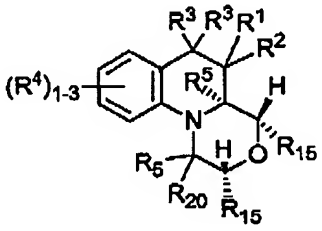
8. (Previously Presented) The method of claim 7, wherein $R^6$ and $R^7$ form $-N(R^{17})-C(O)-N(R^{17})-$ or $-N(R^{17})-C(S)-N(R^{17})-$.

9-10. (Canceled)

11. (Previously Presented) The method of claim 20, wherein each $R^{15}$ is independently H, or $C_{1-7}$ alkyl optionally substituted by one or more $R^{11}$ substituents.

12. (Previously Presented) The method of claim 11, wherein X is $-C(H)(C_{1-4}$ alkyl$)-O-C(H)(C_{1-4}$ alkyl$)-$ .

13. (Previously Presented) The method of claim 20, wherein the compound has the formula of



and each $R_{15}$ is independently

(b) $OR^{11}$,

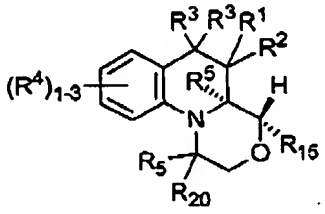
(d) $C_{1-7}$ alkyl which is optionally substituted by one or more $R^{11}$ substituents,

(e) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more $R^{11}$ substituents,

(f) aryl optionally substituted by one or more $R^8$, or

(g) heteroaryl optionally substituted by one or more $R^8$.

14. (Previously Presented) The method of claim 20, wherein the compound has the formula of



and each $R_{15}$ is independently

(b) $OR^{11}$,

(d) $C_{1-7}$ alkyl which is optionally substituted by one or more $R^{11}$ substituents,

(e) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more $R^{11}$ substituents,

(f) aryl optionally substituted by one or more $R^8$, or

(g) heteroaryl optionally substituted by one or more $R^8$.

15. (Canceled)

16. (Previously Presented) The method of claim 20, wherein each $R^5$ is independently H or $C_{1-7}$alkyl.

17. (Previously Presented) The method of claim 20 wherein the compound is selected from the group consisting of:

(2R,4S,4aS)-2,4-dimethyl-8-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

1,2,4,4a-Tetrahydro- 2,4-dimethylspiro[[1,4]oxazino[4,3-a]quinoline-5(6H), 5' (2' H)-pyrimidine]-2',4',6' (1' H,3' H)-trione;

8-Bromo-1,2,4,4a-tetrahydro-2,4-dimethylspiro[[1,4]oxazino[4,3-a]quinoline-5(6H), 5' (2' H)-pyrimidine]-2',4',6' (1' H,3' H)-trione;

8-Fluoro-1,2,4,4a-tetrahydro-2,4-dimethylspiro[[1,4]oxazino[4,3-a]quinoline-5(6H), 5' (2' H)-pyrimidine]-2',4',6' (1' H,3' H)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-8-trifluoromethylspiro[[1,4]oxazino]4,3-a] quinoline-5(6H), 5' (2' H)-pyrimidine]-2',4',6' (1' H,3' H)-trione;

1,1',2, 3'4,4',4a, 6'-Octrahydro-2,4',6'-trioxospiro[[1,4]oxazino[4,3-*a*] quinoline-5(6*H*), 5' (2' *H*)-pyrimidine]-8-carbonitrile;

1,2,4,4a-Tetrahydro-2,4-dimethyl-8-carboxamidespiro[[1,4]oxazino[4,3-a]quinoline-5(6H), 5' (2' H)-pyrimidine]-2',4',6' (1' H,3' H)-trione;

1,2,4,4a-Tetrahydro-8-nitrospiro[[1,4]oxazino[4,3-a]quinoline-5(6H), 5' (2' H)-pyrimidine]-2',4',6' (1' H,3' H)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethylspiro[[1,4]oxazino[4,3-a]quinoline-5(6H), 5' (2' H)-pyrimidine]-2',4',6' (1' H,3' H)-trione;

1,2,4,4a-Tetrahydro-1,4a-dimethyl-8-nitrospiro[[1,4]oxazino[4,3-a]quinoline-5(6H), 5' (2' H)-pyrimidine]-2',4',6' (1' H,3' H)-trione;

8-Bromo-1,2,4,4a-tetrahydro-cis-2,4-dimethylspiro[[1,4]oxazino[4,3-a]quinoline-5(6H), 5' (2' H)-pyrimidine]-4'-thioxo-2',6' (1' H,3' H)-dione;

8-Bromo-1,2,4,4a-tetrahydro-cis-2,4-dimethylspiro[[1,4]oxazino[4,3-a]quinoline-5(6H), 5' (2'*H*)pyrimidine]-2',4',6' (1' methyl, 3' methyl)-trione;

*N*-[1,1',2,3',4,4',4a,6'-Octahydro-2,4-dimethyl-2',4',6'-trioxospiro[[1,4]oxazino[4,3-a]quinolone-5(6*H*),5'(2'*H*)-pyrimidin]-8-yl]acetamide;

*tert*-butyl 1,1',2, 3',4,4',4a,6'-Octahydro-2,4-dimethyl-2',4',6'-trioxospiro[[1,4]oxazino[4,3-a]quinolone-5(6*H*),5'(2'*H*)-pyrimidin]-8-ylcarbamate;

8-Amino-1,2,4,4a-tetrahydro-2,4-dimethylspiro[[1,4]oxazino[4,3-a]quinolone-5(6*H*),5'(2'*H*)-pyrimidine]-2',4',6'(1'*H*,3'*H*)-trione monohydrochloride;

9-Bromo-1,2,4,4a-tetrahydro-2,4-dimethyl-8-nitrospiro[[1,4]oxazino[4,3-a]quinoline-5(6*H*), 5'(2'*H*)-pyrimidine]-2',4',6'(1'*H*,3'*H*)-trione;

8-Acetyl-1,2,4,4a-tetrahydro-2,4-dimethylspiro[[1,4]oxazino[4,3-a]quinoline-5(6*H*),5'(2*H*)-pyrimidine)-2',4',6' (1'*H*,3'*H*)-trione;

8-Ethanone-O-methyloxime-l-1,2,4,4a-tetrahydro-2,4-dimethylspiro[[1,4]oxazino[4,3-a]quinoline-5(6*H*),5'(2*H*)-pyrimidine)-2',4',6' (1'*H*,3'*H*)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-8-(methylsulfonyl)spiro[[1,4]oxazino [4,3-a]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*,3′*H*)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-8-(methylsulfinyl)spiro[[1,4]oxazino [4,3-a]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*,3′*H*)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-8-(methylthio)spiro[[1,4]oxazino[4,3-a]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*,3′*H*)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-9-nitrospiro[[1,4]oxazino[4,3-a]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*,3′*H*)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-8-nitrospiro[[1,4]oxazino[4,3-a]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*methyl*,3′*methyl*)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-8-nitrospiro[[1,4]oxazino[4,3-a]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*, 3′*methyl*)-trione;

1,2, 4,4a-Tetrahydro-4-methyl-8-nitrospiro[[1,4]oxazino[4,3-a]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*,3′*H*)-trione;

1,2,4,4a-Tetrahydro-2-methyl-8-nitrospiro[[1,4]oxazino[4,3-a]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*,3′*s*)-trione;

1,1′,2′3′4′4′a-Hexahydro-2′,4′-dimethyl-1,3-dioxospiro[2*H*-indene-2,5′(6′*H*)-[1,4]oxazino[4,3-*a*]quinoline]-8′-carbonitrile;

1,2,4,4a-Tetrahydro-2,4-dimethyl[1,4]oxazino[4,3-*a*]quinoline-5,5,8(6*H*)-tricarbonitrile;

8-Bromo-1,2,4-4a-tetrhydro-2,4-dimethyl[1,4]oxazino[4,3-*a*]quinoline-5,5(6*H*)-dicarbonitrile;

9-(4-Chlorophenyl)-1,2,4,4a-tetryhydro-2,4-dimethylspiro[[1,4]oxazino[4,3-*a*]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*,3′*H*)-trione;

1,2,4,4a-Tetrhydro-2,4-dimethyl-9-[4-(trifluoromethyoxy)phenyl] spiro[[1,4]oxazino[4,3-*a*]quinoline-5(6*H*),5′(2′*H*)pyrimidine]-2′4′6′(1′*H*,3′*H*)-trione;

1,2,4,4a-Tetrahydro-9-(methoxyphenyl)-2,4-dimethylspiro[[1,4]oxazino[4,3-*a*]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*,3′*H*)-trione;

9-(3-Chloro-4-fluorophenyl)-1,2,4,4a,-tetrahydro-2,4-dimethylsprio[[1,4]oxazino[4,3-*a*]quinoline-5(6*H*),5′(2′*H*)-pyrimidine]-2′,4′,6′(1′*H*,3′*H*)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-9-(3-nitrophenyl)spiro[[1,4]oxazino[4,3-*a*]quinoline-5(6*H*),5'(2'*H*)-pyrimidine]-2',4',6'(1'*H*,3'*H*)trione;

1,1',2,3',4,4',4a,6'-Octahydro-2-4-dimethyl-2',4',6'-trioxospiro[[1,4]oxazino[4,3-*a*]quinoline-5(6*H*),5(2'*H*)-pyrimidin]-9-yl]benzonitrile;

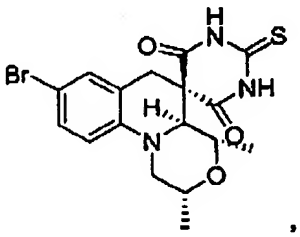
1,2,4,4a-Tetrahydro-2,4-dimethyl-9-[4-(methylsulfonyl)phenyl] spiro[[1,4]oxazino[4,3-*a*]quinoline-5(6*H*),5'(2'*H*)-pyrimidine]-2',4',6'(1'*H*,3'*H*)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-9-(4-pyridinyl)spiro[[1,4]oxazino[4,3-*a*]quinoline-5(6*H*),5'(2'*H*)-pyrimidine]-2',4',6'('*H*,3'*H*)-trione;

Methyl-1,1'-2,3',4,4a,6'-Octahydro-2,4-dimethyl-2',4',6'-trioxospiro[[1,4]oxazino [4,3-*a*]quinoline-5(6*H*),5'(2'*H*)-pyrimidine]-9-carboxylate; and

Methyl-1,1'-2,3',4,4a,6'-Octahydro-2,4-dimethyl-2',4',6'-trioxospiro[[1,4]oxazino [4,3-*a*]quinoline-5(6*H*),5'(2'*H*)-pyrimidine]-8-carboxylate.

18. (Previously Presented) The method of claim 20 wherein the compound is selected from the group consisting of: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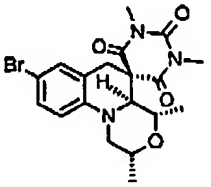
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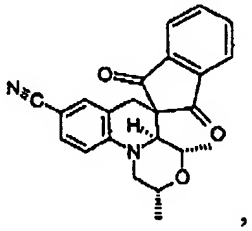
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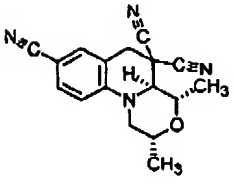
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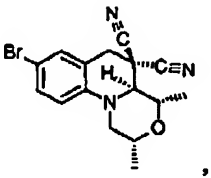
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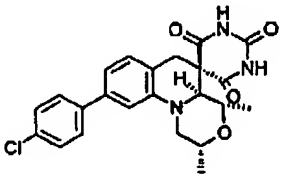
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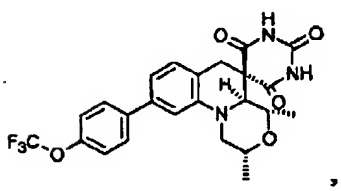
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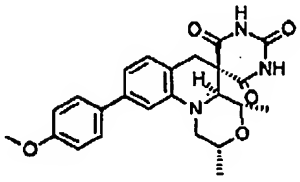
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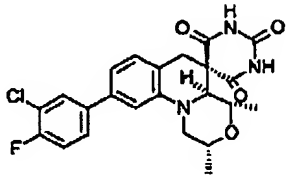
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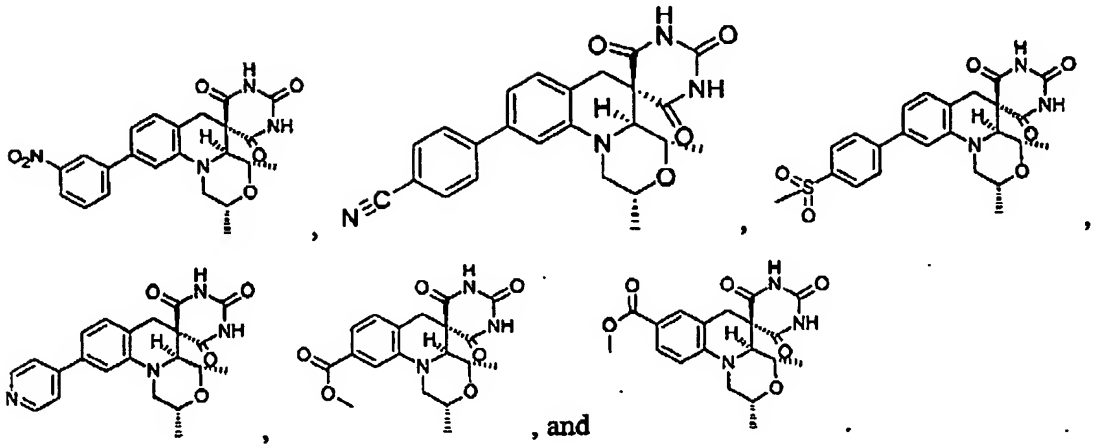
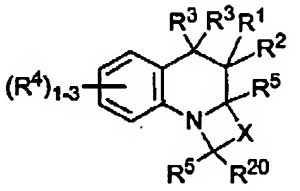


, and

19. (Canceled)

20. (Currently Amended) A method for the treatment of bacterial infections in mammals comprising administration of an effective amount of a compound of formula I, including enantiomeric, diastereomeric, or tautomeric isomers thereof, or any pharmaceutically acceptable salt thereof to said mammal;



I

wherein,

$R^1$ is

(a) $R^{12}$

(b) $C(=O)R^6$, or

(c) CN;

$R^2$ is

(a) $R^{12}$

(b) $C(=O)R^7$,

(c) CN,

(d) $-CH_2-R^7$,

(e) $-NR^{17}R^7$,

(f) $-CH_2COR^7$, or

(g) $-CH_2CH_2COR^7$;

Each $R^3$ is independently

(a) H,

(b) $R^{12}$,

(c) $C_{1-7}$ alkyl, $C_{1-7}$ alkenyl or $C_{1-7}$ alkynyl each of which is optionally substituted by one or more $R^{11}$,

(d) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more $R^{11}$,

(e) aryl optionally substituted by one or more $R^8$,

(f) heteroaryl optionally substituted by one or more $R^8$,

(g) halo, or

(h) both $R_3$ taken together are oxo;

Each $R^4$ is independently

(a) H,

(b) halo,

(c) $OR^{12}$,

(d) $OC(=O)NR^9R^{10}$,

(e) $SR^{12}$,

(f) $S(O)_mR^{13}$,

(g) $NR^9R^{10}$,

(h) $NR^9S(O)_mR^{13}$,

(i) $NR^9C(=O)OR^{13}$,

(j) phenyl optionally substituted by one or more $R^8$,

(k) heteroaryl optionally substituted by one or more $R^8$,

(l) cyano,

(m) nitro,

(n) $CONR^9R^{10}$,

(o) $CO_2R^{12}$,

(p) $C(=O)R^{13}$,

(q) $C(=NOR^{12})R^{13}$,

(r) $S(O)_mNR^9R^{10}$,

(s) $NR^9C(=O)$-$R^{12}$,

(t) $C_{1-7}$ alkyl, $C_{1-7}$ alkenyl or $C_{1-7}$ alkynyl each of which is optionally substituted by one or more $R^{11}$,

(u) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more $R^{11}$,

(v) $N_3$,

(w) $het^1$ optionally substituted by one or more $R^8$, or

(x) $C(O)O$-$C_{1-4}$alkyl-$R^{12}$;

Each $R^5$ is independently,

(a) H,

(b) $C_{1-7}$ alkyl, $C_{1-7}$ alkenyl or $C_{1-7}$ alkynyl each of which is optionally substituted by one or more $R^{11}$,

(c) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more $R^{11}$,

(d) aryl optionally substituted by one or more $R^8$, or

(e) heteroaryl optionally substituted by one or more $R^8$;

$R^6$ and $R^7$ are independently;

(a) $OR^{12}$,

(b) $NR^9R^{10}$,

(c) $R^{13}$, or

(e) $R^6$ and $R^7$ together with the 2 carbons to which they are attached form cyclohexane-1,3-dione optionally substituted by one or more $R^{13}$, cyclopentane-1,3-dione optionally substituted by one or more $R^{13}$, $R^6$ and $R^7$ together form $-N(R^{17})-S(O)_m-N(R^{17})-$, $-N(R^{17})-C(O)-N(R^{17})-$, $-N(R^{17})-C(S)-N(R^{17})-$, $-N(R^{17})-N(R^{17})-$, $-N(R^{17})-C(O)-$, or $-N(R^{17})-$, or $R^6$ and $R^7$ together form a phenyl ring;

$R^8$ is

(a) H,

(b) halo,

(c) $OR^{12}$,

(d) $OCF_3$,

(e) $SR^{12}$,

(f) $S(O)_mR^{13}$,

(g) $NR^9R^{10}$,

(h) $NR^9S(O)_mR^{13}$,

(i) $NR^9C(=O)OR^{13}$,

(j) phenyl optionally substituted by halo, cyano, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy, in the alkyl portion of the $C_{1-7}$alkyl and $C_{1-7}$alkoxy is optionally substituted by one or more $R^{11}$;

(k) heteroaryl optionally substituted by halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy,

(l) cyano,

(m) nitro,

(n) $CONR^9R^{10}$,

(o) $CO_2R^{12}$,

(p) $C(=O)R^{13}$,

(q) $C(=NOR^{12})R^{13}$,

(r) $S(O)_mNR^9R^{10}$,

(s) $NR^9C(=O)$-$R^{12}$,

(t) $C_{1-7}$ alkyl, $C_{1-7}$ alkenyl or $C_{1-7}$ alkynyl each of which is optionally substituted by one or more $R^{11}$,

(u) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more $R^{11}$,

(v) -C(O)H, or

(w) -het$^1$;

$R^9$ and $R^{10}$ are independently

(a) H,

(b) $OR^{12}$,

(c) aryl optionally substituted by one or more $R^{14}$,

(d) heteroaryl optionally substituted by one or more $R^{14}$,

(e) $C_{1-7}$alkyl which is optionally substituted by one or more $R^{11}$,

(f) $C_{3-8}$cycloalkyl which is optionally substituted by one or more $R^{11}$,

(g) $(C=O)R^{13}$, or

(h) $R^9$ and $R^{10}$ together with the nitrogen to which they are attached form morpholine, pyrrolidine, piperidine, thiazine, piperazine, each of the morpholine, pyrrolidine, piperidine, thiazine, piperazine being optionally substituted with $R^{11}$;

$R^{11}$ is

(a) oxo,

(b) phenyl optionally substituted by one or more $R^{14}$,

(c) $OR^{12}$,

(d) $SR^{12}$,

(e) $NR^{12}R^{12}$,

(f) halo,

(g) $CO_2R^{12}$,

(h) $CONR^{12}R^{12}$,

(i) $C_{1-7}$ alkyl, $C_{1-7}$ alkenyl or $C_{1-7}$ alkynyl each of which is optionally substituted by one or more oxo, halo, $OR^{12}$, $SR^{12}$, $C_{1-7}$alkyl, or $NR^{12}R^{12}$ substituents, or

(j) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more oxo, halo, $OR^{12}$, $SR^{12}$, $C_{1-7}$alkyl, or $NR^{12}R^{12}$ substituents;

$R^{12}$ is

(a) H,

(b) $C_{1-7}$ alkyl, $C_{1-7}$ alkenyl or $C_{1-7}$ alkynyl each of which is optionally substituted by oxo, halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy substituents,

(c) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more oxo, halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy substituents,

(d) aryl optionally substituted by one or more halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy substituents, or

(e) heteroaryl optionally substituted by one or more halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy substituents;

$R^{13}$ is

(a) $C_{1-7}$ alkyl which is optionally substituted by one or more by oxo, halo, carboxyl, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy substituents,

(b) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more by oxo, halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy substituents,

(c) aryl optionally substituted by one or more halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy substituents;

(d) heteroaryl optionally substituted by one or more halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy substituents, or

(e) -C(O)OH

$R^{14}$ is

(a) H,

(b) halo,

(c) $C_{1-7}$alkyl,

(d) $OR^{12}$,

(e) $OCF_3$,

(f) $SR^{12}$,

(g) $S(O)_mR^{13}$,

(h) $NR^{12}R^{12}$,

(i) $NR^{12}S(O)_mR^{13}$,

(j) $NR^{12}C(=O)OR^{13}$,

(k) phenyl optionally substituted by halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy,

(l) heteroaryl optionally substituted by halo, $C_{1-7}$alkyl, or $C_{1-7}$alkoxy,

(m) cyano,

(n) nitro,

(o) $CONR^{12}R^{12}$,

(p) $CO_2R^{12}$,

(q) $C(=O)R^{13}$,

(r) $C(=NOR^{12})R^{13}$,

(s) $S(O)_mNR^{12}R^{12}$,

(t) $NR^9C(=O)$-$R^{12}$,

(u) $C_{1-7}$ alkyl, $C_{1-7}$ alkenyl or $C_{1-7}$ alkynyl each of which is optionally substituted by oxo, halo, $OR^{12}$, $SR^{12}$, $C_{1-7}$alkyl, or $NR^{12}R^{12}$ substituents, or

(v) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by oxo, halo, $OR^{12}$, $SR^{12}$, $C_{1-7}$alkyl, or $NR^{12}R^{12}$ substituents;

X is $-C(R^{15})_2-O-C(R^{15})_2-$;

Each $R^{15}$ is independently

(a) H,

(b) $OR^{11}$,

(d) $C_{1-7}$ alkyl which is optionally substituted by one or more $R^{11}$ substituents,

(e) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more $R^{11}$ substituents,

(f) aryl optionally substituted by one or more $R^8$, or

(g) heteroaryl optionally substituted by one or more $R^8$;

~~$R^{16}$ is~~

~~(a) H~~

~~(b) $OR^{12}$;~~

~~(c) $(C=O)R^{13}$;~~

~~(d) $(C=O)OR^{13}$;~~

~~(e) $(C=O)NR^9R^{10}$;~~

~~(f) $S(O)_mR^{13}$;~~

~~(g) $S(O)_mNR^9R^{10}$;~~

~~(h) $C_{1-7}$ alkyl which is optionally substituted by one or more $R^{11}$ substituents;~~

~~(i) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more $R^{11}$ substituents;~~

~~(j) aryl optionally substituted by one or more $R^8$; or~~

~~(k) heteroaryl optionally substituted by one or more $R^8$;~~

$R^{17}$ is

(a) H,

(b) -OH, or

(c) $C_{1-4}$alkyl;

~~$R^{19}$ is~~

~~(a) H,~~

~~(b) $OR^{11}$;~~

~~(c) Oxo,~~

~~(d) $C_{1-7}$alkyl which is optionally substituted by one or more $R^{11}$ substituents,~~

~~(e) $C_{3-8}$cycloalkyl, $C_{3-8}$cycloalkenyl or $C_{3-8}$cycloalkynyl each of which is optionally substituted by one or more $R^{11}$ substituents,~~

~~(f) aryl optionally substituted by one or more $R^8$, or~~

~~(g) heteroaryl optionally substituted by one or more $R^8$;~~

$R^{20}$ is

(a) H,

(b) $C_{1-7}$ alkyl, $C_{1-7}$ alkenyl or $C_{1-7}$ alkynyl each of which is optionally substituted by one or more $R^{11}$,

(c) $C_{3-8}$ cycloalkyl, $C_{3-8}$ cycloalkenyl or $C_{3-8}$ cycloalkynyl each of which is optionally substituted by one or more $R^{11}$,

(d) aryl optionally substituted by one or more $R^8$, or

(e) heteroaryl optionally substituted by one or more $R^8$, ~~or~~

~~(f) $R^{20}$ and $R^{19}$, taken together, form $CH_2$;~~

wherein, "aryl" denotes a phenyl radical or an ortho-fused bicyclic carbocyclic radical having about nine to ten ring atoms in which at least one ring is aromatic;

wherein, "heteroaryl" encompasses a radical attached via a ring carbon or ring nitrogen of a monocyclic aromatic ring containing five or six ring atoms consisting of carbon and 1, 2, 3, or 4 heteroatoms, selected from oxygen (-O-), sulfur (-S-), sulfinyl (S=O) and sulfonyl ( $S(=O)_2$), or nitrogen N(Z) wherein Z is absent or is H, O, $C_{1-4}$alkyl, phenyl or benzyl, or a radical of an ortho-fused bicyclic heterocycle of about eight to ten ring atoms derived therefrom;

het[1] is a C- or N- linked five- (5), six- (6), seven- (7), or eight- (8) membered mono- or bicyclic ring, each mono- or bicyclic ring being fully saturated or partially unsaturated, and having 1-4 heteroatoms selected from the group consisting of oxygen, sulfur, and nitrogen; het[1] being optionally substituted by 1-2 substituents selected from $C_1$-$C_4$alkyl, amino, $C_1$-$C_4$alkylamino, $C_1$-$C_4$alkyloxy, halogen –CN, =O, and =S; and

each m is independently 0, 1, or 2~~; and~~

~~each n is independently 1, 2, or 3~~.

21. (Previously Presented) The method of claim 20 wherein said compound is administered to the mammal orally, parenterally, transdermally, or topically in a pharmaceutical composition.

22. (Original) The method of claim 20 wherein said compound is administered in an amount of from about 0.1 to about 100 mg/kg of body weight/day.

23. (Original) The method of claim 20 wherein said compound is administered in an amount of from about 1 to about 50 mg/kg of body weight/day.

24-25. (Canceled)

26. (Previously Presented) The method of claim 20 wherein the composition comprises an enantiomerically enriched form of a compound of formula I.

27. (Previously Presented) The method of claim 26, wherein the composition comprises at least 50% of one enantiomer of a compound of formula I relative to the other enantiomer of the compound.

28. (Previously Presented) The method of claim 27, wherein the composition comprises at least 80% of one enantiomer of a compound of formula I relative to the other enantiomer of the compound.

29. (Previously Presented) The method of claim 27, wherein the composition comprises at least 90% of one enantiomer of a compound of formula I relative to the other enantiomer of the compound.

30. (Previously Presented) The method of claim 20 wherein the compound is selected from the group consisting of:

(2S,4R,4aR)-4-isopropyl-2-methyl-8-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2R,4S,4aS)-2,4-diethyl-8-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2R,4S,4aS)-2,4-dimethyl-8-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2R,4S,4aS)-8-acetyl-9,10-difluoro-2,4-dimethyl-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2R,4S,4aS)-10-fluoro-2,4-dimethyl-8-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2R,4S,4aS)-2,4-dimethyl-8-[5-(trifluoromethyl)-1,2,4-oxadiazol-3-yl]-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

1,2,4,4a-Tetrahydro-2,4-dimethyl-8-nitrospiro[[1,4]oxazino[4,3-a]quinoline-5(6H),5'(2'H)-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2S,4R,4aR)-2-isopropyl-4-methyl-8-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2S,4R,4aR)-2-isopropyl-4-methyl-8-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2R,4S,4aS)-2,4-diisopropyl-8-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2R,4S,4aS)-2,4-dimethyl-8-(3-methyl-1,2,4-oxadiazol-5-yl)-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2S,4R,4aR)-8-acetyl-10-fluoro-2,4-dimethyl-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

8-bromo-2,4-dimethyl-10-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2R,4S,4aS)-2,4-dimethyl-8-(5-methyl-1,2,4-oxadiazol-3-yl)-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

(2S,4S,4aS)-4-methyl-8-nitro-2-(trifluoromethyl)-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione;

4-azido-3-iodobenzyl (2R,4S,4aS)-2,4-dimethyl-2',4',6'-trioxo-1,1',2,3',4,4',4a,6'-octahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-8-carboxylate; and

(2S,4S,4aS)-2,4-dimethyl-8-nitro-1,2,4,4a-tetrahydro-2'H,6H-spiro[1,4-oxazino[4,3-a]quinoline-5,5'-pyrimidine]-2',4',6'(1'H,3'H)-trione.

31. (Previously Presented) The method of claim 20 wherein:

when each $R_4$ is H, that $R_1$ and $R_2$ are not simultaneously H, CN, or -C(O)-$OCH_3$ or that $R_1$ is not CN and $R_2$ is not –C(O)-$OC_{1-4}$alkyl.

32. (Previously Presented) The method of claim 20 wherein the compound of formula I is administered as a pharmaceutical composition, wherein the pharmaceutical composition additionally comprises a pharmaceutically acceptable carrier.

33. (Previously Presented) The method of claim 4 wherein:

$R^1$ is –C(O)$R^6$;

$R^2$ is –C(O)$R^7$;

each $R^4$ is independently selected from H, F and heteroaryl optionally substituted by one or more $R^8$;

each $R^5$ is H;

$R^6$ and $R^7$ form –N($R^{17}$)-C(O)-N($R^{17}$)-;

each $R^{17}$ is H;

$R^{20}$ is H; and

X is -C(H)($C_{1-4}$ alkyl)-O-C(H)($C_{1-4}$ alkyl)–.

34. (Previously Presented) The method of claim 33 wherein $R^8$ is $C_{1-7}$ alkyl.

35. (Previously Presented) The method of claim 13 wherein:

$R^1$ is –C(O)$R^6$;

$R^2$ is –C(O)$R^7$;

each $R^3$ is H;

each $R^4$ is independently selected from H, F and heteroaryl optionally substituted by one or more $R^8$;

each $R^5$ is H;

$R^6$ and $R^7$ form $-N(R^{17})-C(O)-N(R^{17})-$;

each $R^{15}$ is $C_{1-7}$ alkyl;

each $R^{17}$ is H; and

$R^{20}$ is H.

36. (Previously Presented) The method of claim 35 wherein $R^8$ is $C_{1-7}$ alkyl.

37. (Previously Presented) The method of claim 13 wherein:

$R^1$ is $-C(O)R^6$;

$R^2$ is $-C(O)R^7$;

each $R^3$ is H;

each $R^4$ is independently selected from H, halo, and heteroaryl optionally substituted by one or more $R^8$;

each $R^5$ is H;

$R^6$ and $R^7$ form $-N(R^{17})-C(O)-N(R^{17})-$;

each $R^{15}$ is $C_{1-7}$ alkyl;

each $R^{17}$ is H; and

$R^{20}$ is H.